

Work Order ID 83038

8.30.38

Page 1

April-12-12 1:00:23 PM

Item ID: D206-642-541

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/12 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3274

D

100

0.00

100

DOCUMENT CONTROL

DC

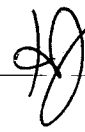
Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A 

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D206-642-541

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Setup Start ***NS1***

Revision ID:

Item Name: Replacement Skidtube

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Start Date: 12/04/2012 Start Qty: 1.00

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Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSI004

AR Aluminum Rod Batch: MB0064

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

SAD 12-04-25

3 of 12-04-26

SAD 12-05-01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Item Name: Replacement Skidtube

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC7-Inspect Chemical Conversion Coat	0.00							
130									
QC	Memo	0.00				①		SAD	12-05-01
Quality Control									
150		0.00							
150									
Skidtubes	Skidtubes	0.00				①		SAD	12-05-01
Skidtubes	Memo								
	1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274								
	2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube								
	3-Bond web in place as per Dwg D3274 & QSI 015.								
	A/RSikaflex-291 <u>7/2/22/</u>								
	Sikaflex expire date: <u>2013-01-24</u>								
	Start: <u>12-05-01</u> Time: <u>5:00</u>								
	Finish: <u>12-05-03</u> Time: <u>10:00</u>								
	(Adhere for 12 hours)								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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Item ID: D206-642-541

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Item Name: Replacement Skidtube

Stop *NS2*

Start Date: 12/04/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

160

QC	Memo	0.00							
----	------	------	--	--	--	--	--	--	--

Quality Control

170		0.00							
-----	--	------	--	--	--	--	--	--	--

170

Skidtubes	Memo	0.00							
-----------	------	------	--	--	--	--	--	--	--

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Deburr

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

12-5-2

- DC 12/05/02

SAD 12-05-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC5- Inspect part completeness to step on W/O

0.00

4.3°
2.93"

180

QC

Memo

0.00

Quality Control

1

0

BE 12/05/03

190

0.00

190

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod A/RAluminum Rod m120/64

BE 12/05/03

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

> M/C 12-5-9

Pto

W/O: 83038		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D706-642-541 PAR #: _____ Fault Category: Landing Gear/skid take NCR: (Yes) No DQA: lyh Date: 12/04/11
 Resolution: Use as is Disposition: Use as is QA: N/C Closed: CK Date: 12/6/12

NCR: 121486		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/5/08	# 190	employee ground the Ridge of the skid take down too much in FWD SADDLE AREA RL employee lack of attention	JP 12/5/08 Shuman	Acceptable	CC SAD 12-5-8	12-5-8	JP 12/5/08 PSI 082	S 12/5/08

NOTE: Date & initial all entries

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Item-ID: D206-642-541

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00

200

QC

Memo

0.00

Quality Control

210

QC10- Inspect visual per QSI004- ground welds

0.00

210

QC

Memo

0.00

Quality Control

220

Pressure Wash per QSI005 4.3

0.00

220

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

(+1)

NX

m.f.
12/05/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
230									
Powdercoat									
Powder Coating									
	Memo	0.00							
	START TIME: 8:40								
	OVEN TEMPERATURE: 3200 F								
	FINISH TIME: 9:10								
240	QC3- Inspect Part Finish	0.00							
240									
QC									
Quality Control									
	Memo	0.00							
250		0.00							
250	HandFinishing								
HandFinish									
Hand Finishing									
	Memo	0.00							
	1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.								
	A/RN/ALPS-3 1114596								
	2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a								
	A/RSikaflex-291 11121221								
	Sikaflex expire date: 12/01								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Work Order ID 83038

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Item ID: D206-642-541

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N900040100

Setup Start *NS1*

Revision ID:

Item Name: Replacement Skidtube

Stop *NS2*

Start Date: 12/04/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC5- Inspect part completeness to step on W/O	0.00							
260									
QC	Memo	0.00							
Quality Control	Inspect Nut Plate & Inserts								
270		0.00							
270	HAND FINISHING RESOURCE #1								
HandFinish	Memo	0.00							
Hand Finishing	1-Install wearpads & gaskets as per Dwg D3274.								
	2-Install ring as per Dwg D3274								
	A/RSikaflex-291 11/12/221								
	Sikaflex expire date: 13/6/1								
	3-Inspect for foreign objects as per QSI 024								
	4-Spray inside of tube on both sides of web with LPS-3								
	A/R LPS-3 Batch: 11/11/596								
	5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.								
	A/RSikaflex-291 11/12/221								
	Sikaflex expire date: 13/6/1								

W/O:		WORK ORDER CHANGES					
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1

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1

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00

280

QC

Memo

0.00

Quality Control

290

Identify as per dwg & Stock Location:

0.00

290

Packaging

Memo

0.00

Packaging

300

QC21- Final Inspection - Work Order Release

0.00

300

QC

Memo

0.00

Quality Control

12/6/12

12/6/12
MLW 12/06/106

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

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Work Order ID: 83038

83038

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:B05.09.23 Revised per D206-642 Rev. JKJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190		Manufactured	No			110	Each	114.0000	1	1			
D2600-1-190									**			SAD 12-04-25	
Extrusion Round 3" 206													

Location	Loc Qty	Loc Code
HALL	45	
69622	45	
LG	69	
76912	69	

D3285-1		Manufactured	No			110	Each	53.0000	1	1			
D3285-1									**			BE 12-04-26	
Cap													

Location	Loc Qty	Loc Code
LG002	53	
52511	6	
52647	47	

D3282-041		Manufactured	No			150	Each	9.0000	1	1			
D3282-041									**			SAD 12-05-01	
Float Web (206L/407)													

Location	Loc Qty	Loc Code
LG	9	
77498	1	
80837	8	

~~80837~~
 D 80837 (1)

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

1,108.000

12

12

D2649

Cross Bolt Spacer

**

BE 12-05-03

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	769	
77574	2	
79502	65	
79503	399	
79564	296	
79565	7	
LG001	339	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
78020	6	
78583	2	
79566	212	

12

D3275-1

Manufactured No

190

Each

201.0000

12

12

D3275-1

Crossbolt Spacer

**

BE 12-05-03

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	103	
80184	103	
LG002	98	
66930	94	
74437	4	

12

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Shop Packet Print

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W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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83038

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

250

Each

1,382.000

2

2

CR3212-4-03

Cherry Rivet

**

yl 12/05/10

Location

Loc Qty

Loc Code

FP002

394

114859

394

ST331

988

110139

2

119017

986

x2

D3415-041

Manufactured

No

250

Each

14.0000

1

1

D3415-041

Nut Plate

**

yl 12/05/10

Location

Loc Qty

Loc Code

ST042

14

67605

14

x1

CCR264SS3-3

Purchased

No

250

Each

497.0000

2

2

CCR264SS3-3

Cherry Rivet

**

yl 12/05/10

Location

Loc Qty

Loc Code

ST331

497

113973

2

117849

109

119017

386

x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 4

Work Order ID: 83038

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

83038

D206-642-541

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

6,003.000

78

78

AI S4-1032-130

Insert

**

YH 12/10/10

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

2798

120807

798

120837

2000

ST282

3000

121269

3000

X78

D3536-15

Manufactured

No

270

Each

34.0000

1

1

D3536-15

Gasket

**

YH 12/05/10

Location

Loc Qty

Loc Code

FP002

34

73318

16

80333

4

81343

14

X1

D3536-23

Manufactured

No

270

Each

21.0000

1

1

D3536-23

Gasket

**

YH 12/05/10

Location

Loc Qty

Loc Code

FP002

21

74510

1

80334

20

B83377

X1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 5

Work Order ID: 83038

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

83038

D206-642-541

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-35

Manufactured No

270

Each

47.0000

1

1

D3536-35

Gasket

**

HL 12/05/10

Location

Loc Qty

Loc Code

FP002

47

80335

11

81340

12

82065

24

Y1

D3536-39

Manufactured No

270

Each

24.0000

1

1

D3536-39

Gasket

**

HL 12/05/10

Location

Loc Qty

Loc Code

FP

12

82252

12

FP002

12

73317

12

Y1

D3535-15

Manufactured No

270

Each

31.0000

1

1

D3535-15

Wearshoe

**

HL 12/05/10

Location

Loc Qty

Loc Code

FP001

31

74512

6

80328

12

81354

13

Y1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 6

Work Order ID: 83038

83038

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-35

Manufactured No

270

Each

44.0000

1

1

D3535-35

Wearshoe

**

Ysl 12/05/10

Location

Loc Qty

Loc Code

FP001

44

67598

1

70815

1

78873

13

79849

1

81358

13

82064

15

Ysl

D3535-39

Manufactured No

270

Each

18.0000

1

1

D3535-39

Wearshoe

**

Ysl 12/05/10

Location

Loc Qty

Loc Code

FP001

18

69759

1

73316

5

74513

12

Ysl

D3535-23

Manufactured No

270

Each

15.0000

1

1

D3535-23

Wearshoe

**

Ysl 12/05/10

Location

Loc Qty

Loc Code

FP001

15

74508

1

80330

14

Ysl

B 81355

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 7

Work Order ID: 83038

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

83038

D206-642-541

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3537-3 Manufactured No

270 Each 33.0000 1 1

D3537-3

Wearpad

**

yl 12/05/12

Location

Loc Qty

Loc Code

FP002

33

78836

24

80338

9

yl

D3537-1 Manufactured No

270 Each 42.0000 9 9

D3537-1

Wearpad

**

yl 12/05/12

Location

Loc Qty

Loc Code

FG

10

79833

10

FP002

32

69817

5

80337

4

81361

23

B81362

xl

AN960C10L Purchased No

270 Each 0.0000 80 80

AN960C10L y

washer

**

xl 12/05/12

AN960C416 Purchased No

270 Each 0.0000 1 1

AN960C416 y

washer

**

xl 12/05/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 8

Work Order ID: 83038

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

83038

D206-642-541

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270 Each

1,016.000 2 2

D3672-1

Phenolic Washer

**

41 12105110

Location

Loc Qty

Loc Code

FP001

34

66821

34

ST060

982

72229

4

76277

478

80369

500

X2

AN3C4A

Purchased No

270 Each

2,864.000 80 80

AN3C4A

BOLT

**

41 12105110

Location

Loc Qty

Loc Code

ST350

2864

120187

1798

120521

28

120769

38

121205

1000

X80

AN4C5A

Purchased No

270 Each

235.0000 1 1

AN4C5A

BOLT

**

41 12105110

Location

Loc Qty

Loc Code

ST355

235

112243

152

119017

83

11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 1:00:27 PM

Page 9

Work Order ID: 83038

83038

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

80.0000

1

1

D2646

Aft Cap

**

91 12/05/10

Location

Loc Qty

Loc Code

FP002

80

62678

5

68280

5

70945

1

71070

2

73294

1

73825

2

78018

22

79500

1

79562

41

X1

D3413-1

Manufactured No

270

Each

48.0000

1

1

D3413-1

Ring

**

91 12/05/10

Location

Loc Qty

Loc Code

ST420

16

79233

16

ST464

32

76754

22

80224

10

Y1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

RELEASED
07.02.12
DEO ATTACHED

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

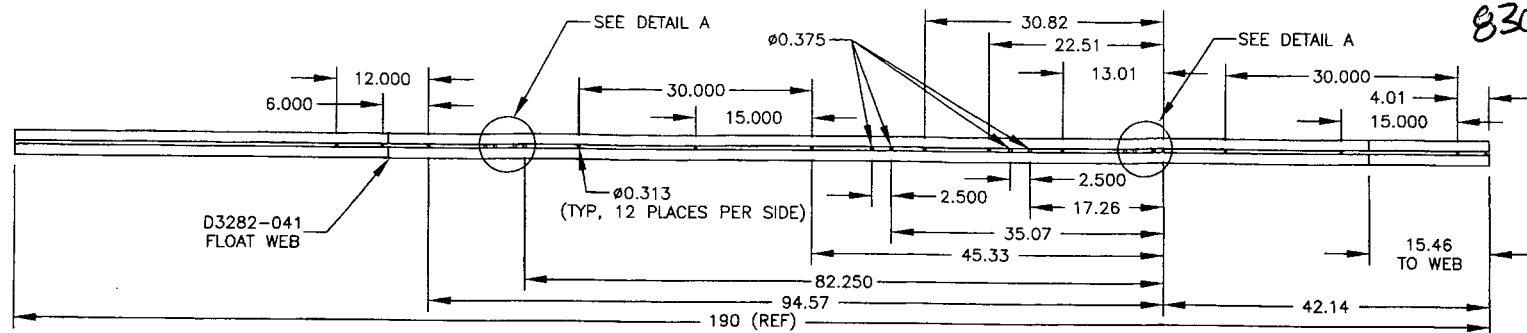
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- ALL HOLES DRILLED ON CENTERLINES.
- BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- WELDING TO BE DONE PER DART QSI 004.
- FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 83638
12/01/12
HLS

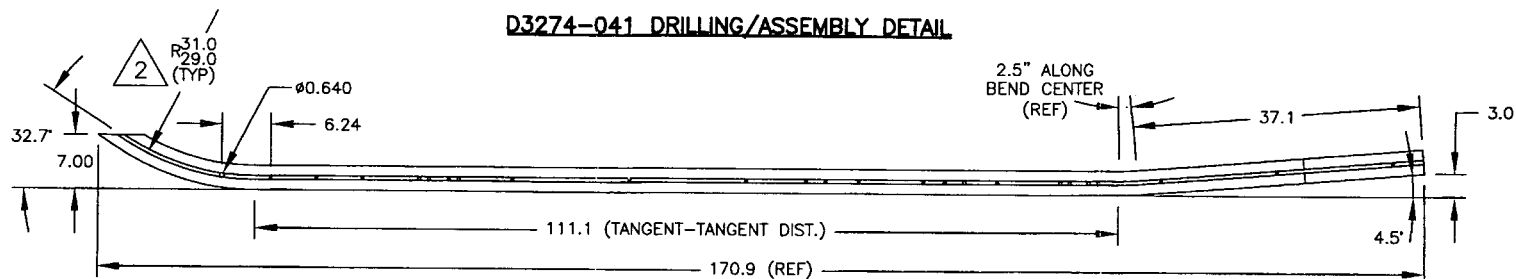
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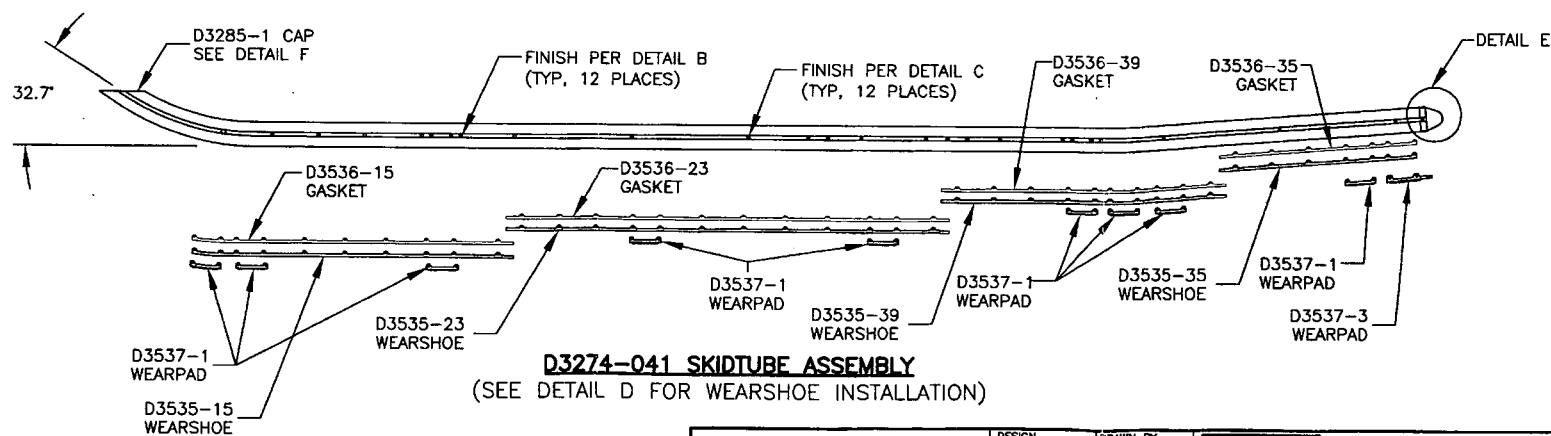
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

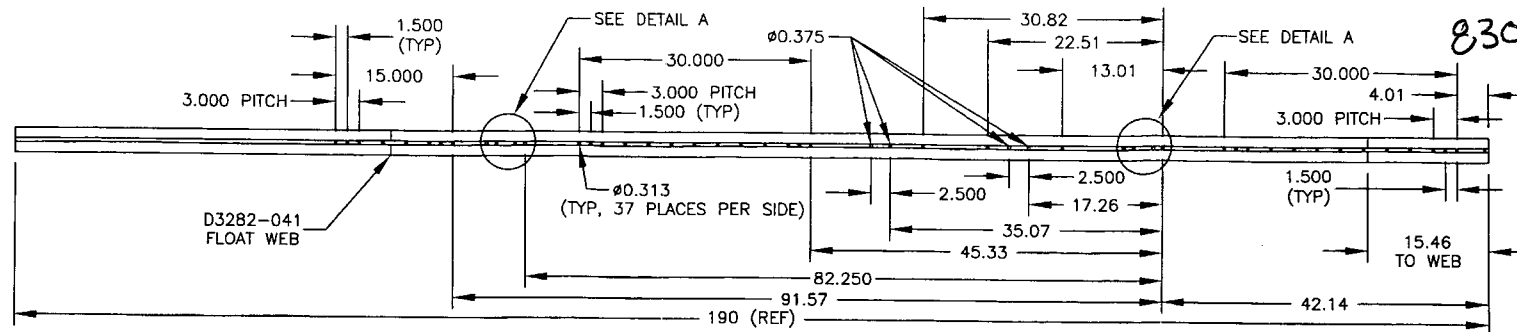
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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	#	APPROVED	#	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 2 OF 4 SCALE 1:15

83038



D3274-043 DRILLING/ASSEMBLY DETAIL

Technical drawing showing a curved pipe section with dimensions and labels:

- Labels:**
 - 2 (Triangle symbol)
 - R31.0
 - R29.0 (TYP)
 - Ø0.640
 - 6.24
 - 2.5" ALONG BEND CENTER (REF)
 - 37.1
 - 3.0
 - 4.5"
- Dimensions:**
 - 32.7
 - 7.00
 - 111.1 (TANGENT-TANGENT DIST.)
 - 170.9 (REF)

32.7'

D3285-1 CAP
SEE DETAIL F

FINISH PER DETAIL B
(TYP, 12 PLACES)

FINISH PER DETAIL C
(TYP, 37 PLACES)

D3536-39
GASKET

D3536-35
GASKET

DETAIL E

D3536-15
GASKET

D3536-23
GASKET

D3537-1
WEARPAD

D3535-23
WEARSHOE

D3537-1
WEARPAD

D3535-39
WEARSHOE

D3537-1
WEARPAD

D3535-35
WEARSHOE

D3537-1
WEARPAD

D3537-3
WEARPAD

D3535-15
WEARSHOE

D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

07.02.12

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DESIGN

DRAWN BY

DART DART AEROSPACE USA, INC.
PORT HADLOCK, MA

CHECKI

ED

APPROVED

DRAWING NO.	REV. D
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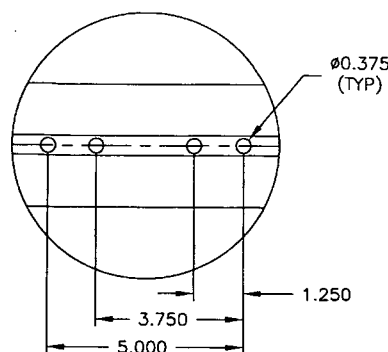
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TITLE	SCALE
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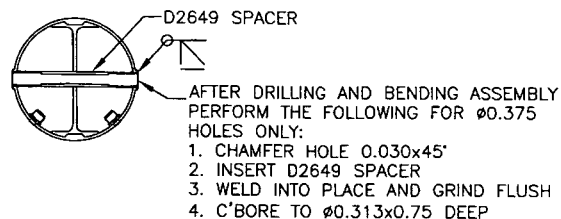
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SKIDTUBE ASSEMBLY 1-15

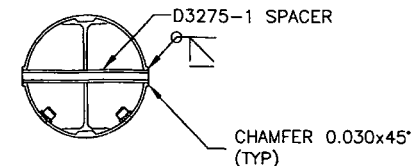
DETAIL A: DRILL DETAIL



DETAIL B FOR 0.375 HOLES ONLY

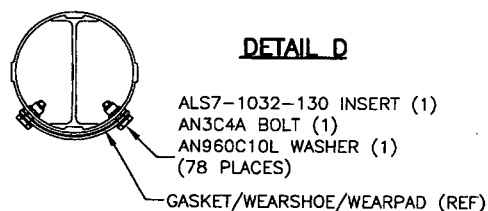


DETAIL C FOR 0.313 HOLES ONLY

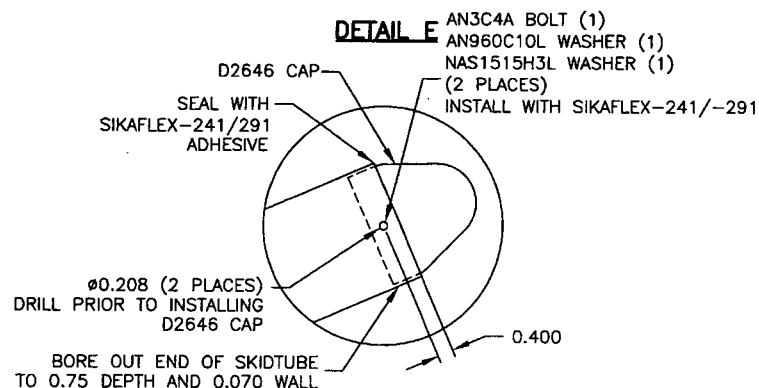


83038

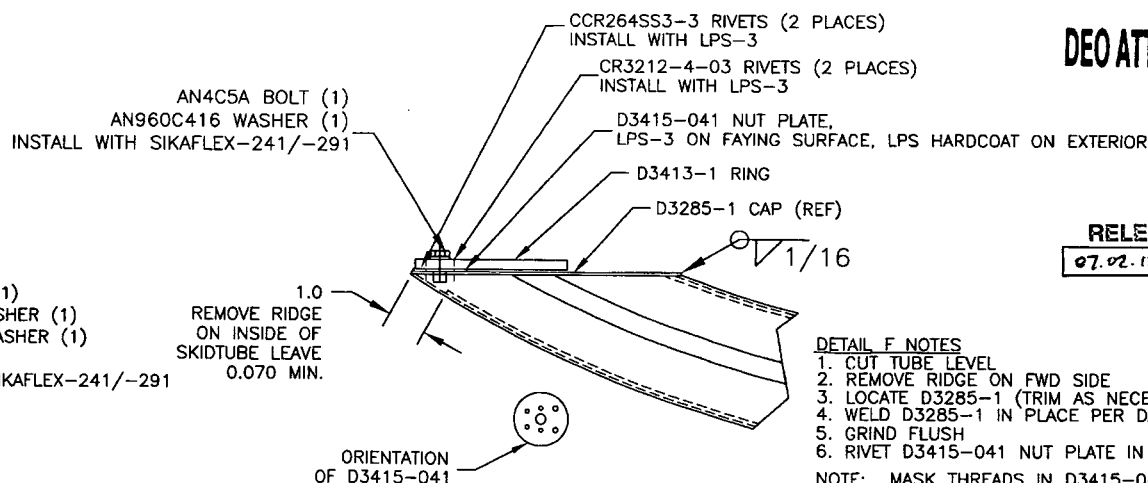
DETAIL D



DETAIL E



DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED

07.02.12

- DETAIL F NOTES**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

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						TITLE	SKIDTUBE ASSEMBLY
						REV. D	SHEET 4 OF 4
						SCALE	1:3

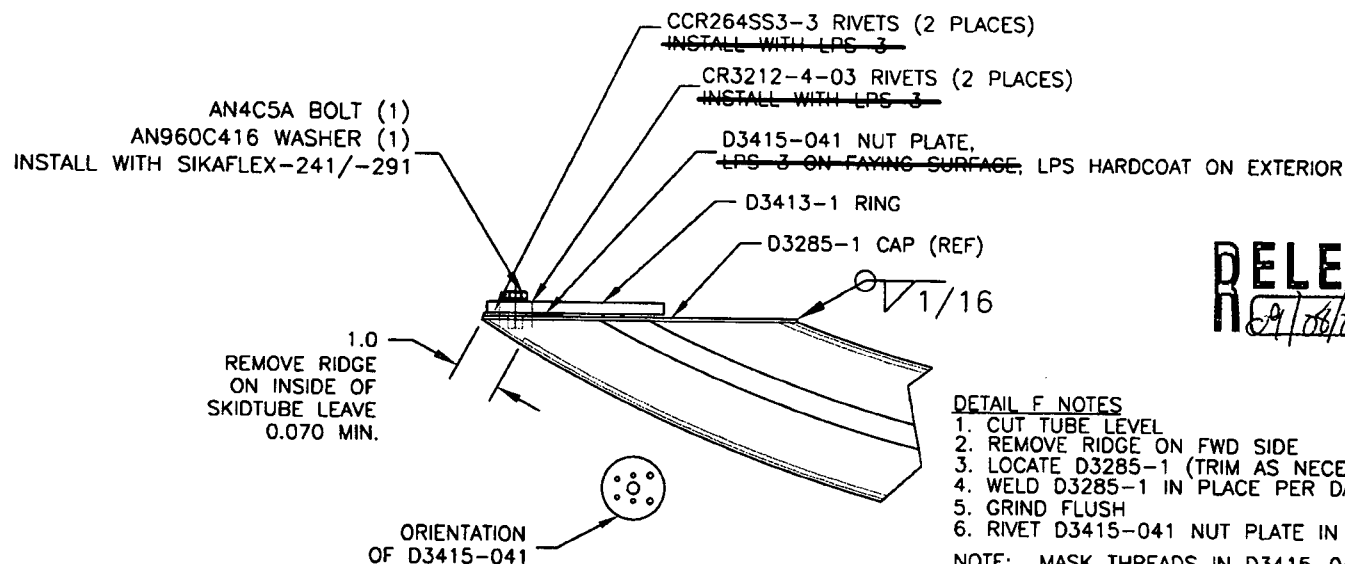
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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NO. 291

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 83400
Part number: A206-642-541
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum.
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[]

Penetration:

pass[☒] fail[]

UNACCEPTABLE

Cracks:

pass[☒] fail[]

Undercut:

pass[☒] fail[]

Pin holes:

pass[☒] fail[]

Overlap (cold lap)

pass[☒] fail[]

Porosity (surface):

pass[☒] fail[]

Coloration:

pass[☒] fail[]

Qualifier David Hermal

Date of Test Coupon 12.04.26

Welder Barclay Elliott

Date of Test Coupon 12.04.26

The above named individual is qualified in accordance with AWS D17.1.2001 to weld